



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

APR 21 2016

Mr. Jim Bateson
Division of Waste Management
NC Department of Environment and Natural Resources
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Dear Mr. Bateson:

We are pleased to provide a copy of the Action Memorandum for the Bond Street Contaminated Well Site located in Raleigh, Wake County, North Carolina. If you have any questions or comments concerning this document, please contact the On-Scene Coordinator at the following address:

Kenneth Rhame, OSC USEPA
North Carolina State University
Rm. 2219 - Jordon Hall
Campus Box 8008
2800 Faucette Drive
Raleigh, NC 27695-8008

Sincerely,


James W. Webster, Chief
Emergency Response, Removal and Prevention Branch

Enclosure

cc: Dawn Taylor Anita Davis
James Webster Ronald Saskowski
Kenneth Rhame Paula Painter
Kerri Sanders Katrina Jones
Matt Taylor Dora Ann Johnson
Subash Patel Charlotte Whitley
Chris Masterson Lloyd Bates




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ACTION MEMORANDUM

SUBJECT: Request for a Time-Critical Removal Action at the Bond Street Contaminated Well Site
Raleigh, Wake County, North Carolina

FROM: Kenneth Rhame, On-Scene Coordinator
Emergency Response, Removal and Prevention Branch 

THRU: James W. Webster, Chief
Emergency Response, Removal and Prevention Branch

TO: Franklin E. Hill, Director
Superfund Division

I. PURPOSE

The purpose of this Action Memorandum pursuant to Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) is to request and document approval of the proposed time-critical removal action described herein for the Bond Street Contaminated Well Site (the Site), located in Raleigh, Wake County, North Carolina. The Site poses a threat to public health and the environment that meets the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) section 300.415(b)(2) criteria for removal actions. The Site is a residential neighborhood that has several private residential drinking water wells that have been contaminated with pesticides and chlorinated solvents, chlordane, dieldrin, heptachlor epoxide and tetrachloroethylene (PCE). There are no known sources of the contamination at this time. The total project ceiling for this time-critical removal action, if approved, will be \$630,000 of which \$360,000 will be funded through the Regional Removal Allowance.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: NCN000410936
SITE ID#: B4Y1
Removal Category: Time-Critical Removal Action

A. Site Description

1. Removal Site Evaluation

In December 2012, the U.S. Environmental Protection Agency Region 4, Superfund Division, Emergency Response, Removal and Prevention Branch (ERRPB) received a request from the Wake County Environmental Services program to conduct a Removal Site Evaluation (RSE) at the Bond Street Contaminated Well Site. Wake County discovered

chlordan and dieldrin at the Bond Street Contaminated Well Site in residential wells that exceed the Removal Management Levels (RML).

The EPA received access agreements and initiated residential well sampling at the Bond Street Contaminated Well Site community in Raleigh, North Carolina in December 2012. The RML for chlordan is 3.8 ug/L, dieldrin is 0.17 ug/L and heptachlor epoxide is 0.14 ug/L. The Maximum Contaminant Level (MCL) for chlordan is 2.00 ug/L; dieldrin does not have a MCL, and the MCL for heptachlor epoxide is 0.2 ug/L.

During the RSE in December of 2012, the EPA sampled 12 wells; three wells exceeded the RML for dieldrin (0.382 ug/L, 0.179 ug/L, and 0.6 ug/L). One well exceeded the RML for heptachlor epoxide, 0.18 ug/L, and one well exceeded the MCL for chlordan, 3.06 ug/L. In summary, five well samples exceeded a RML or MCL.

Upon completing the RSE, which involved interviewing residents, assessing the location of the wells in relation to the foundation of the homes, reviewing data and considering the time of construction of both the homes and the wells (constructed in 1960s), the EPA concluded that the contamination was likely introduced by the homeowners themselves or by the builder via termite treatment; thus did not conduct a removal action in 2012 based on the evidence supporting contamination present as a result of proper pesticide application.

Residents were provided with the EPA sampling results, and appropriate recommendations were provided with these results. The Site was then referred back to the North Carolina Department of Environment and Natural Resources (NC DENR) Aquifer Protection Section (APS) and Wake County Environmental Services.

North Carolina DENR, now the Department of Environmental Quality (DEQ), collected additional samples and provided either filters or public water connections to four homes that met the criteria for assistance using Bernard Allen Drinking Water Fund; a program that provides assistance to low-income households needing assistance to deal with contaminated groundwater. Several households did not meet the criteria for assistance from the Bernard Allen Drinking Water Fund.

In February 2016, the EPA discussed re-evaluating the Site as a potential time-critical removal candidate based on new information provided by Wake County Environmental Services. A home and residential well that were constructed in 2003, sampled by NC DENR had dieldrin concentrations documented at 0.04 ug/L and tetrachloroethylene (PCE) at 0.54 ug/L; the neighboring property has a concentration of 4.9 ug/L PCE, right at the MCL of 5 ug/L.

There are currently five homes that exceed the RML/MCL that have not been provided a municipal connection or a filtration system. There are approximately 273 homes in the "Donut Hole" in the vicinity of the Bond Street neighborhood; 133 homes in the Donut Hole have not yet been sampled due to lack of property access that need to be assessed.

After a review of Site conditions, ERRPB concluded that the Site meets the criteria as set forth in 40 CFR 300.415(b)(2) for a time-critical removal action.

2. Physical Location

The Bond Street Contaminated Well Site neighborhood is in close proximity to the intersection of Trawick Road and Bond Street. This area is not in the City of Raleigh city limits. It is considered a "Donut Hole" where the city has grown around this neighborhood and not annexed this area; thus waterlines have not been extended to this neighborhood.

3. Site Characteristics

The Site is a residential neighborhood that has several private residential drinking water wells that have been contaminated with pesticides and chlorinated solvents; chlordane, dieldrin, heptachlor epoxide and tetrachloroethylene (PCE). There are no known sources of the contamination at this time. The Bond Street Contaminated Well Site neighborhood is in close proximity to the intersection of Trawick Road and Bond Street. There is a plant nursery (Taylors Nursery) located in close proximity of the Trawick Road and Bond Street intersection. The EPA collected samples from twelve irrigation supply wells on the property of Taylors Nursery. All 12 supply wells were sampled by the EPA and by a private consulting firm operating on the behalf of Taylors Nursery. Trace detects of dieldrin were observed in six of the supply wells with a maximum of 0.0498 ppb. This concentration is less than concentrations observed in residential wells located in the Bond Street neighborhood.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

Dieldrin, heptachlor epoxide and chlordane are hazardous substances as defined by Section 101(14) of CERCLA and have been detected in potable residential wells in the area exceeding the Removal Management Levels (RML). PCE is a hazardous substance as defined by Section 101(4) of CERCLA and has been detected in potable residential wells exceeding the Maximum Contaminant Level (MCL).

5. NPL Status

This Site is not on the National Priorities List (NPL).

6. Maps, pictures, and other graphic representation

Maps, pictures and other graphics will be made available upon request.

B. Other Actions to Date

1. State and Local Actions to Date

In 2009, prior to initial discovery of well contamination by Wake County and prior to the Removal Site Evaluation, the City of Raleigh attempted to annex a portion of the Bond Street neighborhood; the residents were successful preventing annexation. The NC DEQ, Water Resources program, has provided municipal connections and/or filters to four homes that met the criteria for Bernard Allen Drinking Water assistance.

2. Potential for Continued State and Local Response

State and local agencies have indicated that their funding is insufficient to conduct the necessary response actions to mitigate exposure at this time.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Threats to Public Health or Welfare or the Environment

Section 300.415 of the National Contingency Plan (NCP) lists a number of factors to be evaluated in determining the appropriateness of a removal action. The following paragraphs apply to the Bond Street Contaminated Well Site:

§300.415(b)(2)(i): “Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.”

There is documented evidence of drinking water wells that have been impacted at the Site with concentrations of chlordane, dieldrin and PCE that exceed RMLs and/or MCLs.

§300.415(b)(2)(ii): Actual or potential contamination of drinking water supplies or sensitive ecosystems.

There is documented evidence of drinking water wells that have been impacted at the Site with concentrations of chlordane, dieldrin, heptachlor epoxide and PCE that exceed RMLs and/or MCLs.

§300.415(b)(2)(vii): “The availability of other appropriate federal or state response mechanisms to respond to the release.”

At this time, there exist no additional State mechanisms able to respond to this incident in the required manner. The Wake County Environmental Services program and NC DEQ have requested the EPA’s assistance to address the hazardous substances at the Site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The EPA proposed actions include the following:

- a. Connect homes that have concentrations that exceed RMLs and/or MCLs as well as residential wells which demonstrate increasing contaminant concentrations of dieldrin, chlordane, heptachlor epoxide or PCE that have municipal water available at the street in front of their home;
- b. Provide point of entry carbon filtrations systems for residential wells that have concentrations that exceed RMLs and/or MCLs.
- c. As a precautionary measure, provide point of entry carbon filtration system for residential wells that show a potential to exceed RMLs and/or MCLs of dieldrin, chlordane, heptachlor epoxide or PCE that do not have municipal water available at the street;
- d. Maintain operation and maintenance of filtration systems for a period of one year;
- e. Conduct additional sampling, as needed;
- f. Conduct all removal actions pursuant to an EPA approved Health and Safety Plan.

2. Contribution to remedial performance

The proposed removal action is warranted to address the threats discussed in Section III, which meet the NCP Section 300.415 (b)(2) removal criteria. The removal action contemplated in the Action Memorandum would be consistent with any remedial action.

3. Description of alternative technologies

An evaluation of all alternative technologies will be made prior to the disposal/treatment phase of this removal.

4. Engineering Evaluation and Cost analysis (EE/CA)

This proposed action is time-critical and does not require an EE/CA.

5. Applicable or Relevant and Appropriate Requirements

On-Site removal actions conducted under CERCLA are required to attain Applicable or Relevant and Appropriate Requirements (ARAR) to the extent practicable, considering the exigencies of the situation. Off-Site removal activities need only comply with all applicable federal and state

laws, unless there is an emergency. This cleanup is being conducted as a time-critical removal action.

ERRPB sent a letter to NC DEQ on March 22, 2016, asking them to identify any State ARARS that they want the EPA to consider during this removal action. The On-Scene Coordinator will continue to coordinate with state officials to identify state ARARs and in accordance with the NCP, determine which ones are to be considered. All waste transferred off-site will comply with the CERCLA Off-Site Rule (40 CFR 300.440).

6. Project Schedule

Removal activities are anticipated to begin within two weeks of approval of this Action Memorandum and receipt of funding for proposed actions. It is anticipated that once activities begin, this removal action will take no more than 12 months of on-site work to complete.

B. Estimated Costs

Extramural Costs:

Regional Allowance Costs:

ERRS	\$360,000
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Non-Regional Allowance Costs:

START	\$150,000
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<u>Subtotal, Extramural Costs:</u>	\$510,000
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20% Contingency:	\$120,000
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TOTAL EXTRAMURAL COSTS:	\$630,000
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VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If this response action is significantly delayed or not taken, the likelihood of releases into the environment increases, increasing the possibility of exposure to the public and environment.

VII. OUTSTANDING POLICY ISSUES

No outstanding policy issues have been determined at this time.

VIII. ENFORCEMENT

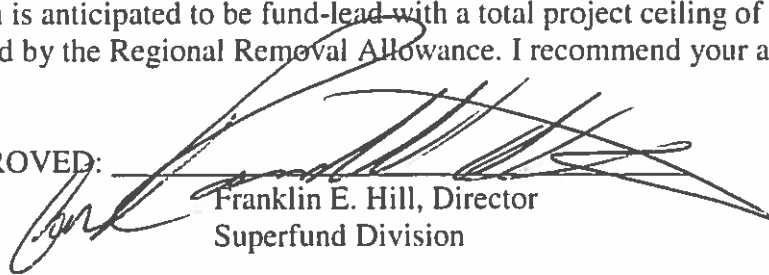
Enforcement activities are ongoing. It is expected that this Site will be conducted as a fund-lead removal action. See attachment 1, "Enforcement Addendum" for more detailed information.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Bond Street Contaminated Well Site, located in Raleigh, Wake County, North Carolina, developed in accordance with CERCLA as amended, and not inconsistent with the National Contingency Plan (NCP). The document is based on the Administrative Record for the Site.

Conditions at the Site meet the NCP Section 300.415 (b)(2) criteria for a removal action. This removal action is anticipated to be fund-lead with a total project ceiling of \$630,000 of which \$360,000 will be funded by the Regional Removal Allowance. I recommend your approval of this Action Memorandum.

APPROVED: _____



Franklin E. Hill, Director
Superfund Division

DATE: _____

4/20/16

DISAPPROVED: _____

Franklin E. Hill, Director
Superfund Division

DATE: _____

Attachments